SECURITY MANAGEMENT PERFORMANCE ANALYSIS OF HIGH BURNING INSTALLATION WITH AID OF MULTIPLE INDICATOR MODELS

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Abstract:
Multiple Indicator models are structural equation models in which latent variables are measured by several indicators. Measurement model can be one-dimensional or pure. To test the logic of preferential attachment in the couple's work changed the basic parameters of the model reference to used instead of direct links indirect links.

Key words: *structural equations, quasipur, network, node*

JEL classification: *M19* –Business Administration - Other

The assumptions of this analysis on the performance of security management will be two types of models characterized by five variables and their effects.

The first model is a model of measurement to specify the five variables of endurance security and empirical measurements which define operational.

The second model is a causal model that establishes causal relationships between variables.

The procedure will be a test of statistical models with hypothetical correlation matrix constructed from measurements of empirical variables.

Tests will be conducted by structural equation modelling[1] [6] - a technique of multivariate analysis of series of dependence relationships between latent variables and observed, created simultaneously.

Structural equation models in which latent variables are measured by several indicators are usually referred to as models for multiple indicators (fig. 1). Taking T as a set of latent variables V and a set of indicators measured, each model can be divided into two parts: the structural model and measurable (fig. 1, b and 1 c).

Graph model contains structural elements of T and limits between elements of T and the graph model contains all the measurement variables.

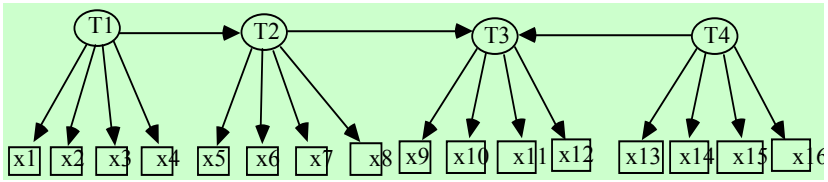
Measurement model can be purely one-dimensional or (if every latent variable xi represents the direct effect of a latent variable and an error εi for each other εj error, εi and εj not related).

The terms "dimensional" and "pure" are used interchangeable.

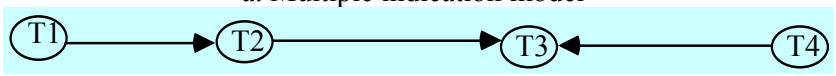
An indicator is "unclean" if produced by another variable in T.

Model A in Fig. 2 is a pure measurement model, while model B is not. In model B, latent variables x1 and x2 are impure because of the error terms are correlated, latent variables x4 and x5 are impure because x5 is a direct cause for x4 and x8 is impure as measured on T2 and T3.

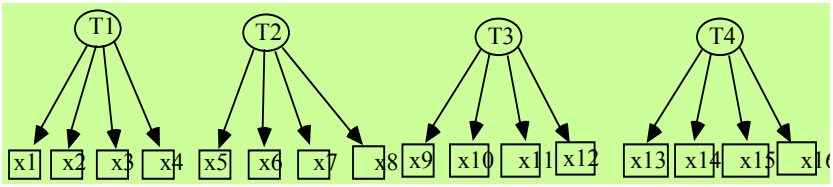
[1] Structural equations models are a family of methods of analysis that translation is a series of hypothetical effect relationship concerned with variables, to develop quantitative estimates of model parameters and their standard errors, to assess an appropriate information system and to determine the equivalent parameters more samples. Techniques for analyzing multivariate relationships of the system of equations are constructed directly on the multiple regressions, factor analysis examination on Saturday traffic patterns**.**



a. Multiple indication model

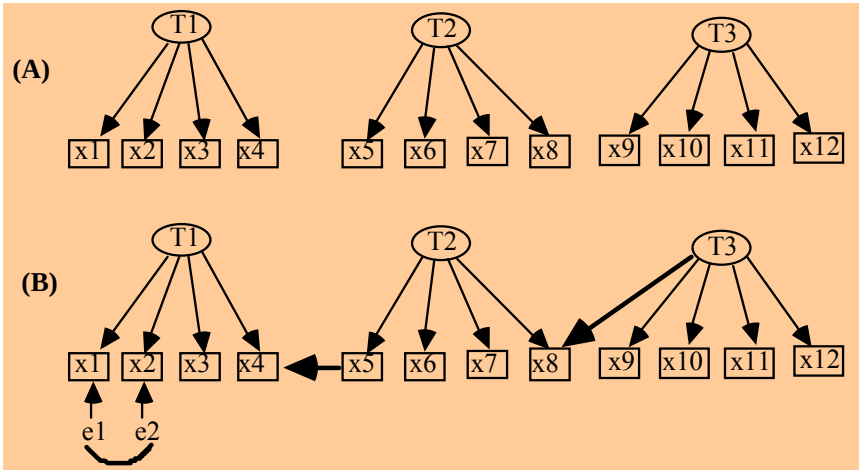


b. Structural model

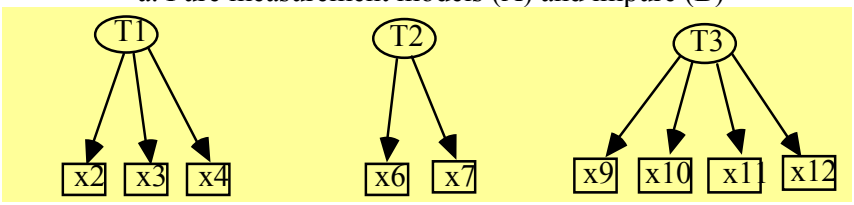


c. Measurement model

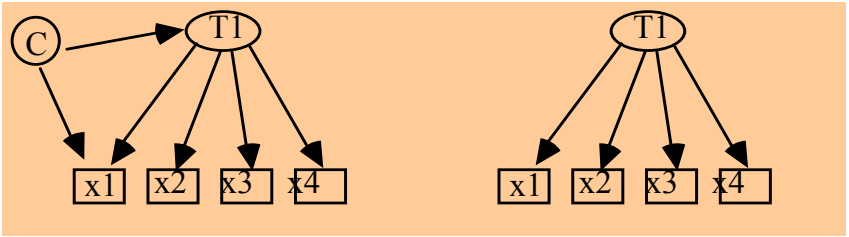
Fig. 1 Structural equation models



a. Pure measurement models (A) and impure (B)



b. Pure measurement models



c. The measurement model quasipur d. Pure measurement model

Fig. 2

All parameterization pure measurement model involves a variety of constraints on deletion covariant observed regardless of what model would be structural [11].

These tests can be made one-dimensionality before specifying the structural model [1].

For example it is assumed that the latent variable X = (x1, x2 ... x12) is produced by a model with structural equation model measuring impure shown in Fig. 2 (B). If these data initially specified measurement shown in Fig. 2 (A) date of entry is used as a constraint to locate and ignore a set of three indicators which are impurities in the model generated.

The set is not unique and if any of the sets of latent variables (x1, x5, x8), (x1, x4, x8), (x2, x5, x8) and (x2, x4, x8) is ignored, the result model measuring the remaining variables is pure. If the set (x1, x5, x8) is ignored, then exits in a pure measurement model in Fig. 2 b, d.

In the current model only among these indicators, all are in fact pure.

The model takes as data input data or data covariant continue for a set of indicators V and an initial measurement model specified as pure. As output data is considered: a pure submodel of a model of measurement originally specified that each latent variable is measured at least three indicators and data that match as much as possible.

If T is a set of latent variables and V is a set of variables measured, a measurement model is quasipur where each variable has a latent origin, each latent variable has at least one survivor measured and the graph model shows that if xi is a indicator of T, where xi is independent of all other variables of T (fig. 2 c) [7], [8].

Assuming that we are interested in the relationship between the three latent variables: T1, T2 and T3, we believe that T1 has influence on T2 and T2 to T3, but we're confident that Q1 has any influence on T3 is not mediated by T2. You should build a model for measuring each of the latent variables, to decide to establish a field specifying the complete model (fig.3) and apply a statistical test on β13, a parameter that represents the direct dependence of T1 and T3

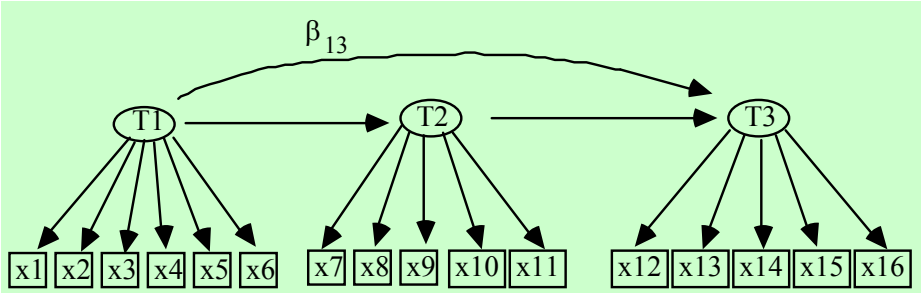


Fig. 3 The relationship between the three latent variables

If $\beta_{13} = 0$, means that T1 is influenced by T3 mediated by T2, but the actual measurement is not one-dimensional as we have shown in Fig. 3, but is replaced by that of Fig. 4, which I estimated.

We will be inclined and in many cases conclude, mistakenly, the direct dependence of T3 on T1, there is a direct effect from T1 to T2 to T3 no mediated.

Committed an error because it means that an indicator was impure left aside in the model of measurement error committed is much larger than the error omitted if the goal is achieved irrespective of the question, by latent variables.

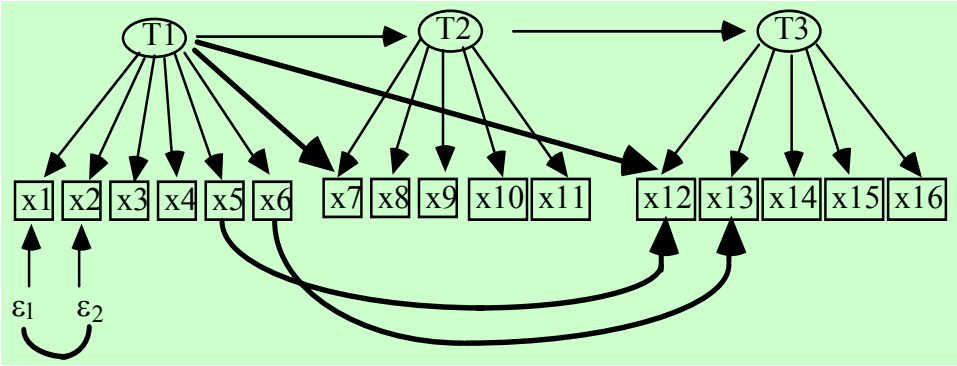


Fig. 4 The effect of dependence of variables

Organizational concept. Organizations are naturally networks. They are an organic concept, an idea to fix the word etymology itself. This organic nature is a theory of strong network and giving concretely pace.

Each stage of growth brings a set of changes well understood.

Over time, increase business eventually reach a limit in the market environment, but dynamic growth ceases although reaches a maximum size. Employees come and go all the time. In reorganization, organizations move, gather; decompose into units larger or smaller to meet the challenges and opportunities for development that are present in constantly around us.

Because so many parts and components, networks are known and labelled before the start of the process, the reorganization is a clear set of explicit features than a typical top.

Reorganization is in no way an instant phenomenon. Networks increase, the position in time. The growth of the organization re assembles spiral. New levels increase in heart position in higher circles all the time.

Growth is fast because the hierarchy is modular, each developing the Level 2 to Level 3 in parallel, each developing the Level 3 to Level 4, while the next phase so

In this case we can label real organizational positions with their levels.

Barabasi [2] to simulate the development of scale free networks based on two principles: growth and preferential attachment.

For scientists in the network, is much increased. Increased introduce more complexity into the network panel, but is more descriptive in the real world.

A link node is not instantaneous in nature, they grow into a network node to node in time.

Networks scale free natural persist and maintain their integrity as essential by adding nodes, and coupling loss. Networks to the new model are open systems which interact in their environment. By contrast, in the old random network model assumes a static population of nodes in a larger closed.

It is known that organizations are open systems. As systems grow and resist them, while bringing dynamic and clear headings and links between them

Often some of these organizations link people Ups to as "reorganization". In general, however, paternalistically organizational development is more "point of equilibrium" in evolution bilogic. Environment induces change interruptions periods of relative stability; bring new capacity to a new level of organization - or catastrophic collapse.

What happens to the second principle of preferential attachment? It is harder to see in the organization, but it is there.

Principle there is so easy that a new node with some probability, to prefer a law already existing node with more connections than a few. As the network grows, the

center is a popular attraction, giving nodes attached as a major advantage in becoming and remaining their center.

In [3] Barabas presents a visual example of the growing network step by step from 2 to 11 knots (center). In his scenario, each node practice preferential attachment, making links with the two current nodes, usually already connected nodes in the neighbourhoods. Centers grow fast in the sequence of 10 steps.

Discussions about strategy and design with senior leaders developed a series of conversations with the specific results of the first organization to key people. Second round of the spiral has led to discussions about the positions at the next (fig. 5).

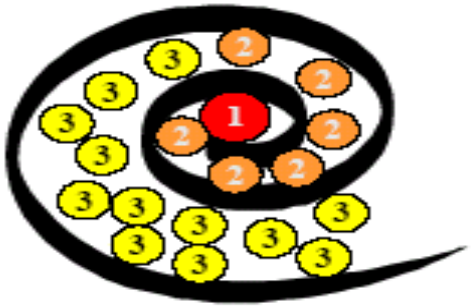


Fig. 5 Spiral organizational

To test the logic of preferential attachment in the couple's work changed the basic parameters of the model reference Barabas. First, to present the relation, it was necessary to use the direct links instead of links used in the indirect model reference. Then, since they used direct links, could begin the first step in the sequence more quickly, using a single root node, a node CEO, instead of two nodes in the sequence that began Barabas.

Following the preferential attachment scenario, the first link went to the highest connected node in the neighbourhood, while the second link worked (usually but not always) to the next highest node connected.

To distinguish between these two links to the first relationship with a thick line and the second with the dotted line.

In the simulation of [12] to count every node, each sequence is counted the number of employment. The link gives each node a "name" unique scenario increases becoming personal as chance would any node in the network increases. The scenario goes to a time in the system "a step, a node. With each step, the configuration changes in matrix organization [12] (fig. 6).

- The scenario begins with the first node, # 1, which describes "node CEO and role in the Level 1 hierarchy;
- # node 2 can make a strong link with the CEO, this position became Level 2. Since the root node receives the first connection, it immediately becomes the central point;
- node # 3, along with the other nodes successive two links are done for node # 3, the choice is simple: establish a first connection with # 1, and the second related to # 2. Node # 4 do the same;
- The new node # 5 is also the # 1 alliance, but do choose where to place the second link. When you look at the # 4 get a matrix of beginning;
- The nodes # 6, # 7 and # 8 combined, the first link is the CEO, but then there are many choices of movement for the second link;
- In step 9, something different happens. Without parameters known to be present simulations, the node # 1, CEO, stops accepting direct after reporting 7. So, # 9

joined node is directly linked and the first time # 2 (which just made the second report);

- This makes # 9 first node level 3;
- The last two nodes, also make a primary connection with # 2 and thereby the level 3 nodes.

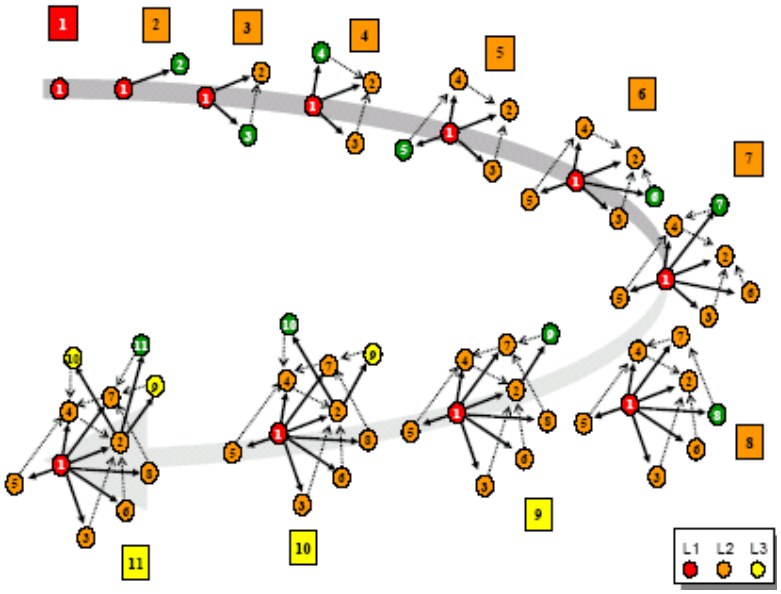


Fig. 6 Organizational matrix

Conclusions

Ignoring the routing and weight (continuous / point) the same structure continues roots from these two links [9]. Linking the steering link and distinguished primary (thick line), a hierarchy heart lies outside the network of roots, which come with the link second (dotted line), every node is collared differently to indicate the level. 11 network nodes generate three levels. It appears that the levels that can channel the growth and preferential attachment with direct links, even where a link connects to every other node, with a sole parent child relationship.

It is not difficult to see how links between preferential attachments reflects in the real world.

People in positions normally attach to the greatest leader they have. For new nodes, which commits the head generates secure high probability of attachment. For the organization, the tendency is issued by CEO.

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